

IN THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (currently amended): A method for determining an optimum procedure for a job change between a first machine job and a subsequent machine job on a printing-material processing machine having at least one control computer, the method comprising:

comparing first data of the first machine job to second data of the subsequent machine job using the at least one control computer, and

establishing an order of adjustments and maintenance operations to be carried out during the job change between the first machine job and the subsequent machine job as a function of the comparing step;

wherein the operations to be carried out during the job change are performed on at least two different components of the printing press to prepare the at least two components for printing the subsequent machine job.

Claim 2 (original): The method as recited in claim 1 wherein the order of operations to be carried out during the job change is calculated in such a manner that a set-up time or a downtime during the job change is minimized.

Claim 3 (original): The method as recited in claim 1 wherein a number of operating personnel of the printing-material processing machine is taken into account in the determination of the optimum procedure.

Claim 4 (original): The method as recited in claim 1 wherein a length of paths to be traveled by operating personnel of the printing-material processing machine while carrying out the order of processes is taken into account in the determination of the optimum procedure.

Claim 5 (original): The method as recited in claim 1 further comprising visually displaying the established order of processes to operating personnel.

Claim 6 (previously presented): The method as recited in claim 5 wherein the operating personnel are guided through individual steps of a calculated order of processes via one or more display devices mounted on the printing-material processing machine.

Claim 7 (original): The method as recited in claim 1 wherein the established order of processes is communicated to operating personnel in acoustic form.

Claim 8 (currently amended): A device for determining an optimum procedure for a job change on a printing-material processing machine comprising:

at least one control computer comparing first data of a first machine job to second data of a subsequent machine job, and executing program steps as a function of the comparing step to establish an order of operations to be carried out during the job change;

wherein the operations to be carried out during the job change are performed on at least two different components of the printing press to prepare the at least two components for printing the subsequent machine job.

Claim 9 (original): The device as recited in claim 8 further comprising one or more display devices for displaying the order of operations.

Claim 10 (original): The device as recited in claim 8 further comprising a system for acoustic communication of the established order of operations to operating personnel.

Claim 11 (original): The device as recited in claim 10 wherein the system for acoustic communication includes at least one headset wirelessly connected to the control computer.

Claim 12 (original): The device as recited in claim 1 further comprising a display device or a system for acoustic communication for communicating information or errors.

Claim 13 (currently amended): A printing press comprising:

a device for determining an optimum procedure for a job change between a first machine job and a subsequent machine job on a printing-material processing machine, the device including at least one control computer comparing first data of a the first machine job to second data of the subsequent machine job, and executing program steps as a function of the comparing step to establish an order of adjustments and maintenance operations to be carried out during the job between the first machine job and the subsequent machine job;

wherein the operations to be carried out during the job change are performed on at least two different components of the printing press to prepare the at least two components for printing the subsequent machine job.

Claim 14 (original): The printing press as recited in claim 13 further comprising at least one main drive for driving printing cylinders and plate cylinders or a blanket cylinder as well as separately driven inking units and inking rollers that can be turned off.

Claim 15 (original): The printing press as recited in claim 13 further comprising individual drives for driving cylinders or additional driven components.

Claim 16 (previously presented): The method as recited in claim 1 wherein the establishing step includes accessing a table containing durations of the operations.

Claim 17 (previously presented): The method as recited in claim 1 wherein the establishing of the order of operations is based solely on the comparing of the first data to the second data.

Claim 18 (previously presented): The method as recited in claim 1 wherein the establishing step includes determining if a first of the operations should occur prior to a second of the operations.

Claim 19 (new): The method as recited in claim 1 wherein the establishing step includes identifying adjustments and maintenance operations to be carried out during the job change

between the first machine job and the subsequent machine job and then determining when the adjustments and maintenance operations are to be carried out with respect to one another during the job change as a function of the comparing step.

Claim 20 (new): The method as recited in claim 1 wherein the establishing step includes determining which steps can be performed concurrently and which steps must be performed consecutively.

Claim 21 (new): The method as recited in claim 3 wherein the order of adjustments and maintenance operations depends on the number of operating personnel of the printing-material processing machine in such a manner that an increased number of operating personnel results in an increased number of steps being performed concurrently.

Claim 22 (new): The method as recited in claim 1 wherein a first component of the at least two components is an inking unit and a second component of the at least two components is a plate cylinder.

Claim 23 (new): The method as recited in claim 1 wherein one of the at least two components is an offset printing cylinder.

Claim 24 (new): The method as recited in claim 1 wherein one of the at least two components is a coating unit.

Claim 25 (new): The method as recited in claim 1 wherein a first component of the at least two components and a second component of the at least two components are driven independently of one another.

REMARKS/ARGUMENTS

Claims 1, 2, 8, 13, 17 and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher (U.S. Pat. No. 5,930,468) in view of Loffler (U.S. Pat. No. 5,010,820). Claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher as modified by Loffler and further in view of Rai (U.S. Pub. No. 2003/0149747). Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher as modified by Loffler and further in view of Yacoub (U.S. Pub. No. 2003/0011085). Claims 5, 6, 9 and 12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher as modified by Loffler and further in view of Bauer (U.S. Pub. No. 2001/0039461). Claims 7 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher as modified by Loffler and Bauer and further in view of Noyes (U.S. Pub. No. 2003/0011792). Claim 11 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher as modified by Loffler, Bauer and Noyes and further in view of Wasenius (U.S. Pub. No. 2002/0151320). Claims 14 and 15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher as modified by Loffler and further in view of Pfeiffer (U.S. 5,447,102). Claim 16 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher in view of Loffler, Bauer and Jackson et al. (U.S. 7,604,848).

Claims 1, 8 and 13 have been amended and new claims 19 to 25 have been added to more particularly and distinctly claim the invention. Support is found at paragraphs [0006] and [0019] to [0023] and Fig. 2, for example.

The drawings have been amended to correct informalities. No new matter has been added.

Applicants respectfully request reconsideration of the application based on the following remarks.

35 U.S.C. 103(a) Rejection

Claims 1, 2, 8, 13, 17 and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher in view of Loffler.

Zingher is discussed in detail in paragraph [0004] of the specification.

Loffler discloses a process for the defined production of an ink distribution appropriate to a production run in the inking unit of rotary printing presses. "To create an ink distribution in the

inking unit appropriate to the print run during the conversion of the inking unit from a previous job to a subsequent and new print job, the invention provides an improved method for the removal of the current ink profile so that the new ink profile can be established for the subsequent print job in a short time, without the necessity of emptying, cleaning and washing the inking unit.” (Abstract).

Claims 1, as amended, recites “[a] method for determining an optimum procedure for a job change between a first machine job and a subsequent machine job on a printing-material processing machine having at least one control computer, the method comprising:

comparing first data of the first machine job to second data of the subsequent machine job using the at least one control computer, and

establishing an order of adjustments and maintenance operations to be carried out during the job change between the first machine job and the subsequent machine job as a function of the comparing step;

wherein the operations to be carried out during the job change are performed on at least two different components of the printing press to prepare the at least two components for printing the subsequent machine job.”

Neither Zingher nor Loffler discloses the step of “establishing an order of adjustments and maintenance operations to be carried out during the job change between the first machine job and the subsequent machine job as a function of the comparing step; wherein the operations to be carried out during the job change are performed on at least two different components of the printing press to prepare the at least two components for printing the subsequent machine job” as now recited in claim 1 and it would not have been obvious to one of skill in the art to have modified Zingher in view of Loffler to meet these limitations. Zinger relates only to establishing an order of print jobs and in no way relates to an order of operations to be carried out during a job change, Zinger cannot satisfy this limitation of claim 1. Recognizing this deficiency of Zingher, the Examiner asserts that process of establishing the ink profile on ink application rollers 13 of Loffler corresponds to the “establishing” step of claim 1. However, it is respectfully submitted that because the process steps identified in Loffler prepare only the ink profile on application rollers 13 of Loffler for printing the next print job, Loffler does not teach or disclose

the limitation that “the operations to be carried out during the job change are performed on at least two different components of the printing press to prepare the at least two components for printing the subsequent machine job,” as now required by claim 1. Thus, any combination of Zingher and Loffler would not meet the requirements of claim 1.

Withdrawal of the rejection under 35 U.S.C. 103(a) of claim 1, and claims 2, 17 and 18 depending therefrom, is respectfully requested.

Claims 8 and 13 both recite the limitation that “the operations to be carried out during the job change are performed on at least two different components of the printing press to prepare the at least two components for printing the subsequent machine job.” Thus, as discussed above with respect to claim 1, because neither Zingher nor Loffler, nor any combination thereof, teaches this limitation of claims 8 and 13, claims 8 and 13 are not obvious in view of these references.

Withdrawal of the rejection under 35 U.S.C. 103(a) of claims 8 and 13 is respectfully requested.

Claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher as modified by Loffler and further in view of Rai (U.S. Pub. No. 2003/0149747).

Zingher and Loffler are discussed above.

Rai discloses a centralized server for providing analytic services to print shops which are located remotely from the centralized server. (See paragraph [0013]).

Claim 3 recites “wherein a number of operating personnel of the printing-material processing machine is taken into account in the determination of the optimum procedure.”

One of ordinary skill in the art would not have modified Zingher in view of Rai because Zingher emphasizes using a data processing device to optimize in terms of time, process and/or in terms of economy of materials for pixel-by-pixel comparison and to determine the method with which the individual print jobs are carried out. (See col. 5; lines 12 to 21 and col. 4; lines 55 to col. 5 lines 6). Furthermore, it is respectfully submitted that one of skill in the art would not have had any reason to have taken into account the number of operating personal to determine the optimum procedure of setting up the ink profile in Loffler, because the procedure

of setting up the ink profile in Loffler is “an *automatic* sequence of operation.” (Col. 5, line 15).
If the sequence is automatic, why would the number of operating personnel matter?

Withdrawal of the rejection under 35 U.S.C. 103(a) of claim 3 is respectfully requested.

Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher as modified by Loffler and further in view of Yacoub (U.S. Pub. No. 2003/0011085).

Zingher and Loffler are discussed above.

Yacoub discloses a networked printing solution which minimizes the necessity of user interaction in the printing process. (See paragraph [0008]).

Claim 4 recites “wherein a length of paths to be traveled by operating personnel of the printing-material processing machine while carrying out the order of processes is taken into account in the determination of the optimum procedure.”

It would not have been obvious to one skilled in the art to modify Zingher in view of Yacoub to meet the claimed limitation because Yacoub does not disclose anything about an order of processes in carried out by operating personnel as recited in claim 4. Yacoub discloses printing solutions for an end user which is not an order of processes of a printing-material processing machine being carried out by operating personnel. Furthermore, it is respectfully submitted that one of skill in the art would not have had any reason to have taken into account a length of paths to be traveled by operating personnel of the printing-material processing machine to determine the optimum procedure of setting up the ink profile in Loffler, because the procedure of setting up the ink profile in Loffler is “an *automatic* sequence of operation.” (Col. 5, line 15). If the sequence is automatic, why would a length of paths to be traveled by operating personnel of the printing-material processing machine matter?

Withdrawal of the rejection under 35 U.S.C. §103(a) of claim 4 is respectfully requested.

Claims 5, 6, 9 and 12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher as modified by Loffler and further in view of Bauer (U.S. Pub. No. 2001/0039461).

Zingher and Loffler are discussed above.

Bauer discloses an apparatus and method for planning and controlling production sequences which permits flexible scheduling and coordination of the print jobs. (See paragraph [0011]).

Bauer is cited for allegedly disclosing the additional limitations of claims 5, 6, 9 and 12 not present in claims 1 and 8 and does not cure the deficiencies of Zingher and Loffler with respect to claim 1, upon which claims 5 and 6 depend, and claim 8, upon which claims 9 and 12 depend. In view of the above arguments with respect to claim 1 and claim 8, withdrawal of the rejection under 35 U.S.C. 103(a) of claims 5, 6, 9 and 12 is respectfully requested.

With further respect to claim 5, neither Zingher, Loffler nor Bauer discloses “the method as recited in claim 1 further comprising visually displaying the established order of processes to operating personnel” as recited in claim 5. Bauer discloses using the planning board to make changes to the display elements to permit scheduling and coordination of the production sequences which is not the “displaying the established order of processes” required by claim 5. (See Bauer paragraph [0013], [0020] and [0031] to [0032]).

With further respect to claim 6, neither Zingher nor Bauer discloses “wherein the operating personnel are guided through individual steps of a calculated order of processes via one or more display devices mounted on the printing-material processing machine” as recited in claim 6. Bauer shows that the display on the planning board can be changed therefore, it is not a “calculated order of processes” as in the present invention. (See Bauer paragraph [0013], [0020] and [0031] to [0032]). Furthermore, it is respectfully submitted that one of skill in the art would have had no reason to have guided operating personnel through the individual steps of setting up the ink profile in Loffler, because the procedure of setting up the ink profile in Loffler is “an *automatic* sequence of operation” and there would have been no reason to have guided the personnel through any steps. (Col. 5, line 15).

Claims 7 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher as modified by Loffler and Bauer and further in view of Noyes (U.S. Pub. No. 2003/0011792).

Bauer and Noyes are cited for allegedly disclosing the additional limitations of claims 7 and 10 not present in claims 1 and 8 and do not cure the deficiencies of Zingher and Loffler with respect to claim 1, upon which claim 7 depends, and claim 8, upon which claim 10 depends. In view of the above arguments with respect to claim 1 and claim 8, withdrawal of the rejection under 35 U.S.C. 103(a) of claims 7 and 10 is respectfully requested.

Claim 11 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher as modified by Loffler, Bauer and Noyes and further in view of Wasenius (U.S. Pub. No. 2002/0151320).

Bauer, Noyes and Wasenius are cited for allegedly meeting the additional limitations of claim 11 not present in claim 8 and do not cure the deficiencies of Zingher and Loffler with respect to claim 8, upon which claim 11 depends. In view of the above arguments with respect to claim 1 and claim 8, withdrawal of the rejection under 35 U.S.C. 103(a) of claims 7 and 10 is respectfully requested.

Claims 14 and 15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher as modified by Loffler and further in view of Pfeiffer (U.S. 5,447,102).

Pfeiffer is cited for allegedly disclosing the additional limitations of claims 14 and 15 not present in claim 13 and does not cure the deficiencies of Zingher and Loffler with respect to claim 13, upon which claims 14 and 15 depend. In view of the above arguments with respect to claim 13, withdrawal of the rejection under 35 U.S.C. 103(a) of claims 14 and 15 is respectfully requested.

Claim 16 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zingher in view of Loffler, Bauer and Jackson et al. (U.S. 7,604,848).

Bauer and Jackson et al. are cited for allegedly meeting the additional limitations of claim 16 not present in claim 1 and do not cure the deficiencies of Zingher and Loffler with respect to claim 1, upon which claim 16 depends. In view of the above arguments with respect to claim 1, withdrawal of the rejection under 35 U.S.C. 103(a) of claim 16 is respectfully requested.